

# Receiving Report

Date:

13/1/19

Batch No:

M 126 390

Supplier:

THYGO.

Dart P/O:

20536

Packing Slip:

Yes

☒

No

Invoice:

Yes

☐

No

Receipt:

Cash

☐

Cr

☒

Release Note Attached:

Yes

☒

No

N/A

Waybill Attached:

Yes

☐

No

☒

Shipment Complete:

Yes

☒

No

N/A

QC6 Inspection

13/07/22

N/A

Work Order

N/A

Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments
<u>M7078T</u>	<u>6B1620X L&amp;S</u>	<u>120</u>	<u>0</u>	<u>0</u>	<u>12</u>	

Initials of receiver (if shipment OK) Level 12

[Signature]

Production/Admin:

Date

13/1/19

Received/Costing

Initial

Location



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO20536**

Purchase Order Date 7/11/2013

PO Print Date 7/12/2013

Page Number 1 of 3

**Order From :**

VC-COP001

**Ship To :** DART AEROSPACE LTD

THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 905 669 9444

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms**

Net 30

**Currency**

CAD

**FOB**

Destination-Collect

**Ship To Contact**

**Ship To Phone**

**Ship Via:** Yours ppd

**Ship Acct:**

*REVISED*

*m126390*

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	List Price	Disc %	Discounted Unit Price	Extended Price
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1	M7075T6B0.375X3.000	7075-T6 BAR 0.375" X 3.000"	7/23/2013		12.00				\$165.00
			Yes		f 12.00				
	MATERIAL: 7075-T6 OR T651/T6510/T6511/T62		7/23/2013						
	ALUMINUM BAR PER AMS-QQ-A-225/9 OR AMS								
	4122/4123/4186/4187 OR PER AMS-QQ-A-A-200/11 OR								
	CUT FROM PLATE QQ-A-250/12								

**Line Total:** \$165.00

2	M7075T6B0.375X8.000	7075-T6 BAR 0.375" X 8.000"	7/23/2013		24.00				\$490.00
			Yes		f 24.00				
	SAME AS ABOVE		7/23/2013						

**Line Total:** \$490.00

**Note:**

7/12/2013



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO20536**

Purchase Order Date 7/11/2013

PO Print Date 7/12/2013

Page Number 2 of 3

Order From : VC-COP001  
THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name  
Vendor Phone 905 669 9444

Ship To Contact  
Ship To Phone  
Ship Via: Yours ppd  
Ship Acct:

Buyer Chantal Lavoie  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 30  
Currency CAD  
FOB Destination-Collect

3	M7075T6B1.500X1.500	7075 T6 BAR 1.500 x 1.500	7/23/2013	12.00	OK	\$235.00
	SAME AS ABOVE		Yes 7/23/2013	f		

Line Total: \$235.00

4	M7075T6B1.500X8.500	7075-T6 BAR 1.500' X 8.500"	7/23/2013	12.00	12.00 OK	\$849.52
	SAME AS ABOVE		Yes 7/23/2013	f		

Line Total: \$849.52

5	M7075T6B2.250X02.750	7075-T6 BAR 2.250' X 2.750"	7/23/2013	36.00	36.125	\$1,194.00
	SAME AS ABOVE		Yes 7/23/2013	f		

Line Total: \$1,194.00

Note:

7/12/2013



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO20536**

Purchase Order Date 7/11/2013

PO Print Date 7/12/2013

Page Number 3 of 3

Order From : VC-COP001  
THYSSENKRUPP MATERIALS CA LTD  
O/A VPK METAL- C/O T27540/PO BOX 4275,POSTAL"A"  
TORONTO, ON M5W 5V8  
CA

Ship To : DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name  
Vendor Phone 905 669 9444

Ship To Contact  
Ship To Phone  
Ship Via: Yours ppd  
Ship Acct:

Buyer  
Customer POID  
Customer Tax # 10127-2607  
Terms Net 30  
Currency CAD  
FOB Destination-Collect

6	M7075T6B4.000X4.500	7075-T6 BAR 4.000' X 4.500"	7/23/2013	12.00		\$1,155.00
			Yes	f	12.04 9/1	
	SAME AS ABOVE		7/23/2013			

Line Total: \$1,155.00

7	M7075T6B1.000X1.000	7075 T6 BAR 1.00 x1.00	7/23/2013	12.00		\$111.00
			Yes	f		
	SAME AS ABOVE		7/23/2013			

Line Total: \$111.00

8	M7075T6B5.000X0.375	7075-T6 BAR 5.000" X 0.375"	7/23/2013	36.00		\$465.00
			Yes	f	36.12 7/23/13	
	SAME AS ABOVE		7/23/2013			

Line Total: \$465.00

PO Total: \$4,664.52

Note: Pricing listed above is as per contract agreement between Dart Aerospace and the respective manufacturer.  
No substitution or deviation without consent.  
Certificate of Conformity or Material Certification required - YES NO

Change Nbr: 4 Change Date: 7/12/2013

# KAISER ALUMINUM FABRICATED PRODUCTS

*Best in Class*

## CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Kaiser Aluminum  
Trentwood Works  
Spokane, WA 99215-5108  
(800) 367-2586

CUSTOMER PO NUMBER: 5400106640-0060		WORK PACKAGE:	CUSTOMER PART NUMBER: ALFLR00984-60.5		PRODUCT DESCRIPTION: Sawed Plate
KAISER ORDER NUMBER: 1120519	LINE ITEM: 5	SHIP DATE: 10/03/2011	ALLOY: 7075	CLAD: BARE	TEMPER: T651
WEIGHT SHIPPED: 4758 LB	QUANTITY: 14 PCS EST.	B/L NUMBER: 2033942	GAUGE: 0.3750 IN	WIDTH: 60.500 IN	LENGTH: 144.500 IN
SHIP TO:  COPPER & BRASS SALES 5450 EAST HOME FRESNO, CA 93727 US			SOLD TO:  COPPER & BRASS SALES ATTN: ACCOUNTS PAYABLE P.O. Box 5116 SOUTHFIELD, MI 48086 US		

MHU 1526136: LOT 559802A4: 14 pieces

### Certified Specifications

AMS 4045/RevK AMS-QQ-A-250/12 ASTM B 209/Rev07

Test Code: 1512

### Test Results:

LOT: 559802A4 CAST: 414 DROP: 28 INGOT: 4

*OK 13/07/22*

Melted in USA  
(ASTM E8/B557)  
(EN 2002-1)

Tensile: Temper	Dir/#Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
T651	LT / 02 (Min:Max)	83.7 : 83.9 (577 : 578)	72.8 : 72.8 (502 : 502)	13.5 : 14.7

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.08	0.17	1.4	0.02	2.4	0.19	5.5	0.03	0.01	0.01	TOT 0.05

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
7075	MIN 0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	MAX 0.05
	MAX 0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT 0.15

Aluminum Remainder

Plant Serial: 4240789

Kaiser Order Number: 1120519

Line Item: 5

Page 1 of 2

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402583660

CstAr

CstOr 250159

Wgt.: 17.000 LB

Date 07/13/2013

*John R. Zambetti*

**KAISER**  
**ALUMINUM**  
**FABRICATED PRODUCTS**

*Best in Class*

**CERTIFIED TEST REPORT**

<http://Online.KaiserAluminum.com>

Kaiser Aluminum  
Trentwood Works  
Spokane, WA 99215-5108  
(800) 367-2586

**CERTIFICATION**

Kaiser Aluminum Fabricated Products, LLC (Kaiser) hereby certifies that metal shipped under this order was melted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content. This material has been inspected, tested and found in conformance with the requirements of the applicable specifications as indicated herein. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements. All metal which is solution heat treated complies with AMS 2772. Any warranty is limited to that shown on Kaiser's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of Kaiser Aluminum Fabricated Products, LLC laboratory. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law. ISO-9001:2000 certified.

MIKE KLOCKE, LABORATORIES SUPERVISOR

Plant Serial: 4240789

Kaiser Order Number: 1120519

Line Item: 5

Page 2 of 2

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402583660

CstAr

CstOr 250159

Wgt.: 17.000 LB

Date 07/13/2013

*John R. Zambetti*

**COPPER AND BRASS SALES****MATERIAL TYPE****ALUMINIUM ALLOYS****PRODUCT DESIGNATION****2014 2024 2224 2324 7050 7075 7150 7175 7475 ALUMEC 89 ALUMEC 99 QC-7****"WARNING"**

SMALL CHIPS,FINE TURNINGS AND DUST MAY IGNITE READILY.EXPLOSION POTENTIAL MAY BE PRESENT WHEN:DUST OR FINES ARE DISPERSED IN THE AIR; FINE, DUST OR MOLTEN ALUMINUM ARE IN CONTACT WITH CERTAIN METAL OXIDES; OR,CHIPS,FINES,DUST OR MOLTEN ALUMINUM ARE IN CONTACT WITH WATER OR MOISTURE.KEEP AWAY FROM IGNITION SOURCE.USE EXPLOSION-PROOF VENTILATION.KEEP MATERIAL DRY.

THIS PRODUCT CONTAINS BERYLLIUM AND COPPER.INHALING BERYLLIUM DUST OR FUMES MAY CAUSE CHRONIC BERYLLIUM DISEASE (CBD),A SERIOUS CHRONIC LUNG DISEASE IN SOME INDIVIDUALS.BERYLLIUM IS A CANCER HAZARD;OVER TIME CBD AND CANCER CAN BE FATAL,TARGET ORGAN IS PRIMARILY THE LUNG.INHALING LARGE AMOUNTS OF COPPER,MAGNESIUM OXIDE,MANGANESE OXIDE,AND ZINC OXIDE FUMES OR DUST MAY CAUSE METAL FUME FEVER WITH FLU-LIKE SYMPTOMS.CHRONIC OVEREXPOSURE TO COPPER MAY CAUSE THICKENING OF THE SKIN;AND SKIN,TEETH,AND HAIR DISCOLORATION.CHRONIC OVEREXPOSURE TO MANGANESE DUST CAN CAUSE CENTRAL NERVOUS SYSTEM DAMAGE,SCARRING OF THE LUNGS AND REPRODUCTIVE HARM IN MALES.TARGET ORGAN IS PRIMARILY THE LUNG,BUT REPEATED HIGH EXPOSURE CAN ALSO AFFECT THE LIVER.CHRONIC OVEREXPOSURE TO IRON OXIDE DUST/FUME MAY CAUSE LUNG SIDEROSIS.CHRONIC OVEREXPOSURE TO SILICON DUST CAN CAUSE CHRONIC BRONCHITIS.OVEREXPOSURE TO AMORPHOUS SILICA CAN CAUSE DRYING OF THE MUCOUS MEMBRANES OF THE EYES,NOSE,AND THROAT.

THIS PRODUCT ALSO CONTAINS NICKEL AND CHROMIUM COMPOUNDS.INHALATION OF NICKEL DUST OR FUME MAY RESULT IN INFLAMMATION OF THE RESPIRATORY TRACT AND CAUSE NASAL AND/OR LUNG CANCER.NICKEL HAS BEEN IDENTIFIED AS A POTENTIAL HUMAN CARCINOGEN.EXPOSURE TO CHROMIUM DUST OR FUMES MAY CAUSE METAL FUME FEVER WITH FLU-LIKE SYMPTOMS AND KIDNEY AND LIVER DAMAGE.UNDER HIGH TEMPERATURES,HEXAVALENT CHROMIUM MAY BE PRODUCED,IF IN THE INSOLUBLE FORM,IT IS A CONFIRMED HUMAN CARCINOGEN.(CALIFORNIA PROPOSITION 65).

IF COATED WITH OIL,MAY CAUSE SKIN IRRITATION/DERMATITIS BY CONTACT.WELDING FUME IS LISTED AS A POSSIBLE CARCINOGENIC TO HUMANS.

READ THE ALUMINIUM/ALUMINIUM ALLOYS MATERIAL SAFETY DATA SHEET (MSDS) ON FILE WITH YOUR EMPLOYER BEFORE WORKING WITH THIS MATERIAL.

\* If processing or recycling produces particulate,use exhaust ventilation or other controls designed to prevent exposure to workers. Examples of such activities include melting, welding,grinding,abrasive sawing,sanding and polishing.Any activity which abrades the surface of this material can generate airborne particulate.Use appropriate NIOSH approved respiratory protection (P95; P100 for lead with, quantitative fit testing required) if exposures exceed the permissible limits.

\* The Occupational Safety and Health Administration (OSHA) have set mandatory limits on occupational exposures.

\* Aluminum, in solid form and as contained in finished products presents no special health risk.

\* Sold for manufacturing purposes only.This product can be recycled; contact your sales representative.

For additional information, call or write to Copper and Brass Sales,22355 West Eleven Mile Road, Southfield, MI 48033,telephone 248-233-5600, or visit our web site @ [www.copperandbrass.com](http://www.copperandbrass.com).

# KAISER ALUMINUM FABRICATED PRODUCTS

*Best in Class*

## CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

Kaiser Aluminum  
Trentwood Works  
Spokane, WA 99215-5108  
(800) 367-2586

CUSTOMER PO NUMBER: 5400106640-0060		WORK PACKAGE:	CUSTOMER PART NUMBER: ALFLR00984-60.5		PRODUCT DESCRIPTION: Sawed Plate
KAISER ORDER NUMBER: 1120519	LINE ITEM: 5	SHIP DATE: 10/03/2011	ALLOY: 7075	CLAD: BARE	TEMPER: T651
WEIGHT SHIPPED: 4758 LB	QUANTITY: 14 PCS EST.	B/L NUMBER: 2033942	GAUGE: 0.3750 IN	WIDTH: 60.500 IN	LENGTH: 144.500 IN
SHIP TO:  COPPER & BRASS SALES 5450 EAST HOME FRESNO, CA 93727 US			SOLD TO:  COPPER & BRASS SALES ATTN: ACCOUNTS PAYABLE P.O. Box 5116 SOUTHFIELD, MI 48086 US		

MHU 1526136: LOT 559802A4: 14 pieces

### Certified Specifications

AMS 4045/RevK AMS-QQ-A-250/12 ASTM B 209/Rev07

*enl 13/07/22*

Test Code: 1512

### Test Results:

LOT: 559802A4 CAST: 414 DROP: 28 INGOT: 4

Melted in USA  
(ASTM E8/B557)  
(EN 2002-1)

Tensile: Temper	Dir/#Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
T651	LT / 02 (Min:Max)	83.7 : 83.9 (577 : 578)	72.8 : 72.8 (502 : 502)	13.5 : 14.7

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.08	0.17	1.4	0.02	2.4	0.19	5.5	0.03	0.01	0.01	TOT 0.05

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
7075	MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.05
	MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15

Aluminum Remainder

Plant Serial: 4240789  
Kaiser Order Number: 1120519  
Line Item: 5

Page 1 of 2

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402583666

CstAr

CstOr 250159

Wgt.: 89.000 LB

Date 07/13/2013

*John. Zambetti*



**KAISER**  
**ALUMINUM**  
**FABRICATED PRODUCTS**

*Best in Class*

**CERTIFIED TEST REPORT**

<http://Online.KaiserAluminum.com>

Kaiser Aluminum  
Trentwood Works  
Spokane, WA 99215-5108  
(800) 367-2586

**CERTIFICATION**

Kaiser Aluminum Fabricated Products, LLC (Kaiser) hereby certifies that metal shipped under this order was melted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content. This material has been inspected, tested and found in conformance with the requirements of the applicable specifications as indicated herein. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements. All metal which is solution heat treated complies with AMS 2772. Any warranty is limited to that shown on Kaiser's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of Kaiser Aluminum Fabricated Products, LLC laboratory. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law. ISO-9001:2000 certified.

MIKE KLOCKE, LABORATORIES SUPERVISOR

Plant Serial: 4240789

Kaiser Order Number: 1120519

Line Item: 5

Page 2 of 2

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402583666

CstAr CstOr 250159

Wgt.: 89.000 LB Date 07/13/2013

*John R. Zambetta*

**COPPER AND BRASS SALES****MATERIAL TYPE****ALUMINIUM ALLOYS****PRODUCT DESIGNATION****2014 2024 2224 2324 7050 7075 7150 7175 7475 ALUMEC 89 ALUMEC 99 QC-7****"WARNING"**

SMALL CHIPS,FINE TURNINGS AND DUST MAY IGNITE READILY.EXPLOSION POTENTIAL MAY BE PRESENT WHEN:DUST OR FINES ARE DISPERSED IN THE AIR; FINE, DUST OR MOLTEN ALUMINUM ARE IN CONTACT WITH CERTAIN METAL OXIDES; OR,CHIPS,FINES,DUST OR MOLTEN ALUMINUM ARE IN CONTACT WITH WATER OR MOISTURE.KEEP AWAY FROM IGNITION SOURCE.USE EXPLOSION-PROOF VENTILATION.KEEP MATERIAL DRY.

THIS PRODUCT CONTAINS BERYLLIUM AND COPPER.INHALING BERYLLIUM DUST OR FUMES MAY CAUSE CHRONIC BERYLLIUM DISEASE (CBD),A SERIOUS CHRONIC LUNG DISEASE IN SOME INDIVIDUALS.BERYLLIUM IS A CANCER HAZARD;OVER TIME CBD AND CANCER CAN BE FATAL,TARGET ORGAN IS PRIMARILY THE LUNG.INHALING LARGE AMOUNTS OF COPPER,MAGNESIUM OXIDE,MANGANESE OXIDE,AND ZINC OXIDE FUMES OR DUST MAY CAUSE METAL FUME FEVER WITH FLU-LIKE SYMPTOMS.CHRONIC OVEREXPOSURE TO COPPER MAY CAUSE THICKENING OF THE SKIN;AND SKIN,TEETH,AND HAIR DISCOLORATION.CHRONIC OVEREXPOSURE TO MANGANESE DUST CAN CAUSE CENTRAL NERVOUS SYSTEM DAMAGE,SCARRING OF THE LUNGS AND REPRODUCTIVE HARM IN MALES.TARGET ORGAN IS PRIMARILY THE LUNG,BUT REPEATED HIGH EXPOSURE CAN ALSO AFFECT THE LIVER.CHRONIC OVEREXPOSURE TO IRON OXIDE DUST/FUME MAY CAUSE LUNG SIDEROSIS.CHRONIC OVEREXPOSURE TO SILICON DUST CAN CAUSE CHRONIC BRONCHITIS.OVEREXPOSURE TO AMORPHOUS SILICA CAN CAUSE DRYING OF THE MUCOUS MEMBRANES OF THE EYES,NOSE,AND THROAT.

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IF COATED WITH OIL,MAY CAUSE SKIN IRRITATION/DERMATITIS BY CONTACT.WELDING FUME IS LISTED AS A POSSIBLE CARCINOGENIC TO HUMANS.  
READ THE ALUMINIUM/ALUMINIUM ALLOYS MATERIAL SAFETY DATA SHEET (MSDS) ON FILE WITH YOUR EMPLOYER BEFORE WORKING WITH THIS MATERIAL.

\* If processing or recycling produces particulate,use exhaust ventilation or other controls designed to prevent exposure to workers. Examples of such activities include melting, welding,grinding,abrasive sawing,sanding and polishing.Any activity which abrades the surface of this material can generate airborne particulate.Use appropriate NIOSH approved respiratory protection (P95; P100 for lead with, quantitative fit testing required) if exposures exceed the permissible limits.

\* The Occupational Safety and Health Administration (OSHA) have set mandatory limits on occupational exposures.

\* Aluminum, in solid form and as contained in finished products presents no special health risk.

\* Sold for manufacturing purposes only.This product can be recycled; contact your sales representative.

For additional information, call or write to Copper and Brass Sales,22355 West Eleven Mile Road, Southfield, MI 48033,telephone 248-233-5600, or visit our web site @ [www.copperandbrass.com](http://www.copperandbrass.com).



**CERTIFIED TEST REPORT**  
Constellium Rolled Products Ravenswood, LLC

4

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR P28302 4075 INCLUSION SERIAL#: 20130527P28302 PAGE 1 OF 3

CUSTOMER PURCHASE ORDER NO. & ITEM 5400179097				Constellium ORDER NO. 110-513091		<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."  Constellium Rolled Products Ravenswood, LLC Rt 2 South, Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA  <i>Rodney J. Felty</i> Rodney J. Felty - Laboratory Manager	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 1.53000	WIDTH 60.500	LENGTH 144.500		
ITEM ORDERED MOLD PLATE-DIST GE SPEC PLATE, SAWED MILL <i>13/07/20</i>							
CUSTOMER SPECIFICATION AMS-QQ-A-250/12							
PART NUMBER ALFLR00998		B/L NUMBER P28300		DATE SHIPPED 05/28/13			
WEIGHT SHIPPED 8,520		NO. OF PIECES 6		GOVT. CONTRACT NO.			

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX									
388201	LT	2	***** T651 80.3	81.1	70.4	70.9	***** 13.5	13.5											
All material contained in lot 388201 was cast and manufactured in the USA.																			
401811	LT	2	80.7	80.9	70.4	70.4	13.0	13.5											
All material contained in lot 401811 was cast and manufactured in the USA.																			
ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS																			
AMS 4045K AND ASTM B209-10																			
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTA MAX.		
	SEE ACTUAL CHEMICAL COMPOSITION																		
	ALUMINUM REMAINDER																		

P-860-155D (08/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402583664

CstAr

CstOr 250159

Wgt.: 197.000 LB

Date 07/13/2013

*John R. Zambetti*



**CERTIFIED TEST REPORT**  
Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR P28302 4075 INCLUSION SERIAL#: 20130527P28302 PAGE 2 OF 3

CUSTOMER PURCHASE ORDER NO. & ITEM 5400179097				Constellium ORDER NO. 110-513091		<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."  Constellium Rolled Products Ravenswood, LLC Rt 2 South, Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA  <i>Rodney J. Felty</i> Rodney J. Felty - Laboratory Manager	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 1.53000	WIDTH 60.500	LENGTH 144.500		
ITEM ORDERED MOLD PLATE-DIST GE SPEC PLATE, SAWED MILL							
CUSTOMER SPECIFICATION AMS-QQ-A-250/12							
PART NUMBER ALFLR00998		B/L NUMBER P28300		DATE SHIPPED 05/28/13			
WEIGHT SHIPPED 8,520		NO. OF PIECES 6		GOVT. CONTRACT NO.			

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX									
			ACTUAL CHEMICAL COMPOSITION																
388201	C		SI= 0.06	FE= 0.12	CU= 1.43	MN= 0.03	MG= 2.51												
			CR= 0.21	ZN= 5.56	TI= 0.03	ZR= 0.01													
			OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER																
401811	C		SI= 0.05	FE= 0.11	CU= 1.45	MN= 0.02	MG= 2.54												
			CR= 0.21	ZN= 5.57	TI= 0.03	ZR= 0.01													
			OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER																
CHEM COMP.	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
	SEE ACTUAL																		
	CHEMICAL COMPOSITION																		
ALUMINUM REMAINDER																			

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402583664

CstAr

CstOr 250159

Wgt.: 197.000 LB

Date 07/13/2013

*John R. Zambetti*



# CERTIFIED TEST REPORT

Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

COPPER&BR P28302 4075 INCLUSION SERIAL#: 20130527P28302 PAGE 3 OF 3

CUSTOMER PURCHASE ORDER NO. & ITEM 5400179097				Constellium ORDER NO. 110-513091		<b>CERTIFICATION</b> "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."  <b>Constellium Rolled Products Ravenswood, LLC</b> Rt 2 South, Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA  <i>Rodney J. Felty</i> Rodney J. Felty - Laboratory Manager
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 1.53000	WIDTH 60.500	LENGTH 144.500	
ITEM ORDERED MOLD PLATE-DIST GE SPEC PLATE, SAWED MILL						
CUSTOMER SPECIFICATION AMS-QQ-A-250/12						
PART NUMBER ALFLR00998		B/L NUMBER P28300		DATE SHIPPED 05/28/13		
WEIGHT SHIPPED 8,520		NO. OF PIECES 6		GOVT. CONTRACT NO.		

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX									
THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.																			
CHEMISTRY BY OES: ARKSPARK																			
CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT.																			
WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399.																			
WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557.																			
Mark Paperwork: ALFLR00998																			
DUNS Number: 090570149; CAGE Code: 1YWL9																			
Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product.																			
"END OF CERTIFICATION"																			
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.		
	SEE ACTUAL CHEMICAL COMPOSITION																		
ALUMINUM REMAINDER																			

P-860-155D (06/11)

From: ThyssenKrupp Materials NA

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402583664

CstAr

CstOr 250159

Wgt.: 197.000 LB

Date 07/13/2013

**COPPER AND BRASS SALES****MATERIAL TYPE****ALUMINIUM ALLOYS****PRODUCT DESIGNATION****2014 2024 2224 2324 7050 7075 7150 7175 7475 ALUMEC 89 ALUMEC 99 QC-7****"WARNING"**

SMALL CHIPS,FINE TURNINGS AND DUST MAY IGNITE READILY.EXPLOSION POTENTIAL MAY BE PRESENT WHEN:DUST OR FINES ARE DISPERSED IN THE AIR; FINE, DUST OR MOLTEN ALUMINUM ARE IN CONTACT WITH CERTAIN METAL OXIDES; OR,CHIPS,FINES,DUST OR MOLTEN ALUMINUM ARE IN CONTACT WITH WATER OR MOISTURE.KEEP AWAY FROM IGNITION SOURCE.USE EXPLOSION-PROOF VENTILATION.KEEP MATERIAL DRY.

THIS PRODUCT CONTAINS BERYLLIUM AND COPPER.INHALING BERYLLIUM DUST OR FUMES MAY CAUSE CHRONIC BERYLLIUM DISEASE (CBD),A SERIOUS CHRONIC LUNG DISEASE IN SOME INDIVIDUALS.BERYLLIUM IS A CANCER HAZARD;OVER TIME CBD AND CANCER CAN BE FATAL,TARGET ORGAN IS PRIMARILY THE LUNG.INHALING LARGE AMOUNTS OF COPPER,MAGNESIUM OXIDE,MANGANESE OXIDE,AND ZINC OXIDE FUMES OR DUST MAY CAUSE METAL FUME FEVER WITH FLU-LIKE SYMPTOMS.CHRONIC OVEREXPOSURE TO COPPER MAY CAUSE THICKENING OF THE SKIN;AND SKIN,TEETH,AND HAIR DISCOLORATION.CHRONIC OVEREXPOSURE TO MANGANESE DUST CAN CAUSE CENTRAL NERVOUS SYSTEM DAMAGE,SCARRING OF THE LUNGS AND REPRODUCTIVE HARM IN MALES.TARGET ORGAN IS PRIMARILY THE LUNG,BUT REPEATED HIGH EXPOSURE CAN ALSO AFFECT THE LIVER.CHRONIC OVEREXPOSURE TO IRON OXIDE DUST/FUME MAY CAUSE LUNG SIDEROSIS.CHRONIC OVEREXPOSURE TO SILICON DUST CAN CAUSE CHRONIC BRONCHITIS.OVEREXPOSURE TO AMORPHOUS SILICA CAN CAUSE DRYING OF THE MUCOUS MEMBRANES OF THE EYES,NOSE,AND THROAT.

THIS PRODUCT ALSO CONTAINS NICKEL AND CHROMIUM COMPOUNDS.INHALATION OF NICKEL DUST OR FUME MAY RESULT IN INFLAMMATION OF THE RESPIRATORY TRACT AND CAUSE NASAL AND/OR LUNG CANCER.NICKEL HAS BEEN IDENTIFIED AS A POTENTIAL HUMAN CARCINOGEN.EXPOSURE TO CHROMIUM DUST OR FUMES MAY CAUSE METAL FUME FEVER WITH FLU-LIKE SYMPTOMS AND KIDNEY AND LIVER DAMAGE.UNDER HIGH TEMPERATURES,HEXAVALENT CHROMIUM MAY BE PRODUCED,IF IN THE INSOLUBLE FORM,IT IS A CONFIRMED HUMAN CARCINOGEN.(CALIFORNIA PROPOSITION 65).

IF COATED WITH OIL,MAY CAUSE SKIN IRRITATION/DERMATITIS BY CONTACT.WELDING FUME IS LISTED AS A POSSIBLE CARCINOGENIC TO HUMANS.

READ THE ALUMINIUM/ALUMINIUM ALLOYS MATERIAL SAFETY DATA SHEET (MSDS) ON FILE WITH YOUR EMPLOYER BEFORE WORKING WITH THIS MATERIAL.

\* If processing or recycling produces particulate,use exhaust ventilation or other controls designed to prevent exposure to workers. Examples of such activities include melting, welding,grinding,abrasive sawing,sanding and polishing.Any activity which abrades the surface of this material can generate airborne particulate.Use appropriate NIOSH approved respiratory protection (P95; P100 for lead with, quantitative fit testing required) if exposures exceed the permissible limits.

\* The Occupational Safety and Health Administration (OSHA) have set mandatory limits on occupational exposures.

\* Aluminum, in solid form and as contained in finished products presents no special health risk.

\* Sold for manufacturing purposes only.This product can be recycled; contact your sales representative.

For additional information, call or write to Copper and Brass Sales,22355 West Eleven Mile Road, Southfield, MI 48033,telephone 248-233-5600, or visit our web site @ [www.copperandbrass.com](http://www.copperandbrass.com).

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Constellium



CERTIFIED TEST REPORT  
Constellium Rolled Products Ravenswood, LLC

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

46544

48086

COPPER&BR P12604 4075 INCLUSION SERIAL#: 20130522P12604 PAGE 1 OF 3

CUSTOMER PURCHASE ORDER NO. & ITEM

Constellium ORDER NO.

5400179097

110-513097

ALLOY

CLAD.

TEMPER

GAUGE

WIDTH

LENGTH

7075

00

T651

4.00000

60.500

144.500

ITEM ORDERED

MOLD PLATE-DIST GE

SPEC PLATE, SAWED

MILL

13/07/20

CUSTOMER SPECIFICATION

AMS-QQ-A-250/12

PART NUMBER

B/L NUMBER

DATE SHIPPED

ALFLR00369

P12600

05/24/13

WEIGHT SHIPPED

NO. OF PIECES

GOVT. CONTRACT NO.

11,100

3

CERTIFICATION

"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."

Constellium Rolled Products Ravenswood, LLC  
Rt 2 South, Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

Rodney J. Felty  
Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX									
401831	LT	2	***** T651 79.7	80.6	68.3	69.8	***** 12.5	12.5											
All material contained in lot 401831 was cast and manufactured in the USA.																			
-----																			
ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS																			
-----																			
ASTM B209-10,AMS 4045K																			
CHEM COM	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
	SEE ACTUAL CHEMICAL COMPOSITION																		
ALUMINUM REMAINDER																			

P-860-155D (06/11)

Wgt.: 276.000 LB

CstAr

From: ThyssenKrupp NA - ECAD

Del.: 2402583663

CstOr 250159

Date 07/15/2013

John R. Gumbert

Wgt.: 276.000 LB

Cst#AR

Cust. THYSSENKRUPP MATERIALS NA - ECAD

Del.: 2402583663

Cst#R 250159

Date 07/15/2013

**Constellium**

**COPPER & BRASS SALES**  
**1015 SAINT JEROME STREET**  
**MISHAWAKA IN**

46544



**COPPER & BRASS SALES**  
**P.O. BOX 5116**  
**SOUTHFIELD MI**

48086

# **CERTIFIED TEST REPORT**

Constellium Rolled Products Ravenswood, LLC

**COPPER&BR P12604 4075 INCLUSION SERIAL#: 20130522P12604 PAGE 2 OF 3**

CUSTOMER PURCHASE ORDER NO. & ITEM		Constellium ORDER NO.	
5400179097		110-513097	
ALLOY	CLAD.	TEMPER	GAUGE
7075	00	T651	4.00000
WIDTH	LENGTH		
60.500	144.500		
ITEM ORDERED			
MOLD PLATE-DIST GE			
SPEC PLATE, SAWED MILL			
CUSTOMER SPECIFICATION			
AMS-QQ-A-250/12			
PART NUMBER	B/L NUMBER	DATE SHIPPED	
ALFLR00369	P12600	05/24/13	
WEIGHT SHIPPED	NO. OF PIECES	GOVT. CONTRACT NO.	
11,100	3		

**CERTIFICATION**

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Constellium Rolled Products Ravenswood, LLC  
 Rt 2 South, Century Road  
 P.O. BOX 68  
 RAVENSWOOD, WV 26164 USA

*Rodney J. Felty*  
 Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS													
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN	MAX												
401831	C		ACTUAL CHEMICAL COMPOSITION																			
			SI= 0.06	FE= 0.13	CU= 1.45	MN= 0.05	MG= 2.50															
			CR= 0.18	ZN= 5.41	TI= 0.03	ZR= 0.01																
			OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER																			
CHES 0024	ALLOY		SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS			
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.		
			SEE ACTUAL CHEMICAL COMPOSITION																			
ALUMINUM REMAINDER																						

P-860-165D (06/11)

CITEM 0024

ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
SEE ACTUAL CHEMICAL COMPOSITION																		

P-860-165D (06/11)



Wgt.: 276.000 LB

Cst#AR

Cust. THYSSENKRUPP MATERIALS NA - ECAD Del.: 2402583663

From: ThyssenKrupp Materials NA

**Constellium**

COPPER & BRASS SALES  
1015 SAINT JEROME STREET  
MISHAWAKA IN

46544



COPPER & BRASS SALES  
P.O. BOX 5116  
SOUTHFIELD MI

48086

# CERTIFIED TEST REPORT Constellium Rolled Products Ravenswood, LLC

COPPER&BR P12604 4075		INCLUSION SERIAL#: 20130522P12604		PAGE 3 OF 3	
CUSTOMER PURCHASE ORDER NO. & ITEM 5400179097		Constellium ORDER NO. 110-513097		CERTIFICATION	
ALLOY 7075	CLAD. 00	TEMPER T651	GAUGE 4.00000	WIDTH 60.500	LENGTH 144.500
ITEM ORDERED MOLD PLATE-DIST GE SPEC PLATE, SAWED MILL					
CUSTOMER SPECIFICATION AMS-QQ-A-250/12					
PART NUMBER ALFLR00369		B/L NUMBER P12600		DATE SHIPPED 05/24/13	
WEIGHT SHIPPED 11,100		NO. OF PIECES 3		GOVT. CONTRACT NO.	

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Rt 2 South, Century Road  
P.O. BOX 68  
RAVENSWOOD, WV 26164 USA

*Rodney J. Felty*  
Rodney J. Felty - Laboratory Manager

LOT NUMBER	TEST DIRECTION	NO. OF TESTS	ULTIMATE STRENGTH K.S.I.		YIELD STRENGTH K.S.I.		ELONGATION %		COND % IACS										
			MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.									
<p>THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE.</p> <p>THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.</p> <p>CHEMISTRY BY OES: ARKSPARK</p> <p>CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT.</p> <p>WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399.</p> <p>WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557.</p> <p>Mark Paperwork: ALFLR00369</p> <p>DUNS Number: 090570149; CAGE Code: 1YWL9</p> <p>Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product.</p> <p>"END OF CERTIFICATION"</p>																			
CHEM COMP	ALLOY	SILICON		IRON		COPPER		MANGANESE		MAGNESIUM		CHROMIUM		ZINC		TITANIUM		OTHERS	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	EACH MAX.	TOTAL MAX.
	SEE ACTUAL CHEMICAL COMPOSITION																		
ALUMINUM REMAINDER																			

P-880-155D (06/11)

*John R. Gumbert*

Date 07/15/2013

Cst#OR 250159